

State of Ohio IT Guideline

Hypervisor Selection

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Approved By: H. Samuel Orth III, State CIO

1.0 Purpose

This document offers guidance to state agencies in the selection of a hypervisor for x86 virtual server environments.

2.0 Background

This guideline was developed as a result of the investigations and recommendations of the Server/Storage Virtualization and Consolidation Work Group (SSVC WG). The SSVC was formed by the Multi-Agency CIO Advisory Council (MAC) Enterprise Technical Architecture Subcommittee (ETA SC) to develop enterprise technical architecture and best practice recommendations for server and storage virtualization and consolidation.

3.0 Hypervisor Selection Guideline

Virtualization can significantly reduce server infrastructure cost. These savings are realized from:

- Reduction in the number of physical servers in the data centers;
- Reduction in energy use by servers;
- Faster server deployment and provisioning;
- Standardization of server, operating system, and virtualization software environments;
- Overall reductions in capital and operating expenses; and
- More efficient use of resources.

Adopting a common hypervisor has the advantage of allowing the state to use its aggregate buying power to reduce the purchase price. In addition, a common virtualization platform creates a multiple-agency pool of knowledgeable technical resources who can serve in cross-agency roles for technology planning and troubleshooting.

The majority of state agencies that have a virtualization initiative underway have selected the VMware suite of virtualization products, resulting in a *de facto* standard for the state of

Ohio. VMware is currently the market leader and vendor of choice for large organizations. The product has evolved through four major versions and is a stable enterprise tool.

State agencies can leverage significant discounts on VMware products, maintenance and service by utilizing the state's VMware Enterprise Purchase Program. The lack of standardization in the market and the state's desire to embrace an enterprise-wide virtualization approach necessitates selecting a proprietary solution at this time. State agencies should:

- Adopt the VMware hypervisor as the hypervisor used in x86 server environments; and
- Purchase the VMware hypervisor and related server virtualization products, maintenance and services using the State's VMware Enterprise Purchase Program

3.1 Revisions to this Guideline

Virtualization is a new and dynamically changing market with many developing technologies. The state will continue to monitor and evaluate developments in the market and re-assess technology directions as appropriate. As such, this guideline will be reviewed on a biannual basis.

4.0 References

Section 125.18 of the Ohio Revised Code (ORC) gives the State Chief Information Officer the authority to coordinate and superintend statewide efforts to promote common use and development of technology by state agencies.

5.0 Procurement Guidance

The Ohio Department of Administrative Services, Office of Information Technology (DAS/OIT) is assisting agencies in using a statewide program to purchase VMware's virtualization software products and services at a significant discount: up to 70 percent for software and 35 percent for software maintenance. This statewide purchasing program leverages the state's buying power to help all of Ohio's agencies and political subdivisions realize these savings. DAS/OIT has purchased Technical Account Management (TAM) services from VMware to provide agencies with virtualization planning and related technical services.

The VMware hypervisor and associated tools should be used on x86 servers for the creation of virtual computing environments for the state. Use of other hypervisors is strongly discouraged except in cases where technical issues may demand a different approach. A business case documenting such issues must accompany any purchase request.

For further information on this important cost saving program, please send an e-mail request to State.ITStandards.Manager@oit.ohio.gov.

6.0 Definitions

Hypervisor. A hypervisor, also known as a Virtual Machine Monitor, is a software component that allows multiple host operating systems to share physical resources, presents the guest operating systems with a virtual platform, and monitors the execution of the guest operating systems.

7.0 Related Resources

None

8.0 Inquiries

Direct inquiries about this guideline to:

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Ohio IT Guidelines can be found on the Internet at: www.ohio.gov/itp.

9.0 Document Revisions

Date	Description
August 2010	Original version of the hypervisor guideline

10.0 Attachments

None